

Please replace the paragraph beginning at line 20 of page 8 with the following rewritten paragraph:

As can be expected, the thicker the combined thickness of upper dielectric and the overcoat, the better their thermal isolation properties. Since the overcoat layer's primary function is to produce a reliable head-disk interface, they may not necessarily have the desirable thermal isolation properties needed to ensure a low surface temperature. It is therefore advantageous to utilize the upper cladding layer, whose required material properties are to be low loss and compatible with the active layer, to perform the task of thermal isolation. In this manner, the overcoat species and thicknesses can be chosen purely for its head-disk interface contributions. However, one can also take advantage of the different material characteristics of the upper cladding versus the overcoat. For example, diamond-like carbon or other forms of carbon are widely used in magnetic disks as lubricants. Such layers typically have a high thermal conductivity. Although they will not contribute to thermal insulation, these layers can be used advantageously to dissipate the heat that is allowed to pass through the insulating upper cladding, leading to lower heat energy per unit area on the surface of the disk immediately underneath the lens.

In the Claims

Please substitute claims 13 and 21-23 below for the pending claims with the same numbers. A prior version of pending claims 13 and 21-23 with all changes made by the current amendment shown using bracketing and underlining is attached hereto, and is captioned "Version with Markings to Show Changes Made."

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13. (Twice Amended) The optical disk of claim 11 such that the protective overcoat layer has a thermal conductivity that dissipates heat that reaches the surface when optical energy impinges on the recording layer.

21. (Twice Amended) An optical recording system comprising:

an air-incident optical disk compatible with flying optical heads, in which a recording layer is separated from a surface of the disk by intervening layers of a total thickness less than about 1 μm and a composition such that the highest temperature of the surface during normal operation is less than the desorption temperature of water;

a flying optical head where the lowest facet of the lens element of the flying optical head is supported to float in close proximity to the surface of the disk and where the optical focus of the flying head is at the recording layer;

means of delivering a beam of light to the optical head so as to raise the recording layer to a temperature exceeding about 250°C;

means of optically detecting and differentiating the presence and absence of the mark as seen by the optical beam; and

tracking detection and feedback means to ensure that the optical beam can follow the path of the marks.

22. (Amended) The system of claim 21 where the air-incident disk uses a phase change recording layer.

23. (Amended) The system of claim 21 where the flying optical head comprises a solid immersion lens element having a spherical surface and substantially flat surface facing the disk.
